

P 79C

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CONFIDENTIAL

12 August 1957

MEMORANDUM FOR: CHIEF, TSS/AUDIO SUPPORT DIVISION

THRU : ASSISTANT CHIEF, TSS/R&D  
ASSISTANT CHIEF, TSS/TA

SUBJECT : Equipment Submitted for Operational Evaluation;  
Report on

1. Submitted herewith is report on the RCA UMTR-1 Radio Transmitter-Receiver and the RCA UMTR-1 Modified Transmitter-Receiver.

2. Should you have any questions, please contact

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TSS/APD

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APPROVED:

ACTING CHIEF, TSS/APD

Distribution:

Addressee - Orig. & 1

TSS/SRB - 1

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TSS/APD/WLS:ls (12 Aug 57)

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REPORT ON EQUIPMENT SUBMITTED FOR OPERATIONAL EVALUATION

1. NAME OF DEVICE

- a. RCA UMR-1 Radio Transmitter-Receiver
- b. RCA UMR-1 Modified Transmitter-Receiver

2. APD PROJECT NUMBER, CONTRACTOR, AND CONTRACT NUMBER

P-79C - Radio Corporation of America - PSC-302

3. CLASSIFICATION AND STERILITY

Equipment-Unclassified, Agency Interest-SECRET, Agency Sterile

4. NUMBER OF DEVICES SUBMITTED FOR EVALUATION WITH THIS REPORT

- a. 3 UMR-1
- b. 6 UMR-1 Modified
- c. 50 Spare Batteries

5. ADDITIONAL NUMBERS ON HAND

- a. 3 UMR-1
- b. 6 UMR-1 Modified
- c. 50 Spare Batteries

6. FUTURE DELIVERY, IF ANY

None

7. ADDITIONAL PROCUREMENT PLANS, IF ANY

None. This is a limited-production commercial item, of which we have obtained the maximum available. Further production plans are indefinite.

8. REQUIREMENT SOURCE AND DATE

None

9. PERTINENT REFERENCES

None

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**10. GENERAL PURPOSE OF DEVICE**

Short-range two-way radio communication. All equipments furnished operate on 51.0 mc/s, using frequency modulation. The frequency deviation and stability are such as to be compatible with the military AN/PRC-10; where operating considerations permit an AN/PRC-10 should always be used at one end of the communication circuit in order to obtain the maximum range.

**11. UNUSUAL FEATURES AND OUTSTANDING CHARACTERISTICS**

The UMTR-1 is the normal commercial version. It is designed for hand-held operation and the operator must speak at a normal tone of voice directly into the microphone to obtain useful output. The UMTR-1 modified has been changed so as to more nearly meet the requirements for body-concealed operation. Additional amplifiers permit picking up conversations at several feet from the microphone. The receiving circuit can be disabled for missions involving only clandestine pickup.

**12. KNOWN LIMITATIONS AND SHORTCOMINGS**

Between identical sets the range is only about  $\frac{1}{2}$  mile in the open, and will be less in a built-up area, unless an AN/PRC-10 is used at one end. The equipment is not especially rugged. Maintenance is difficult and requires special equipment and the services of an expert. Most alignment and repair operations can be performed only at the contractor's plant in Camden, New Jersey.

**13. STATUS OF OPERATING INSTRUCTION MANUAL**

Operating instructions are supplied with each equipment. There are no spares.

**14. STATUS OF SERVICE AND MAINTENANCE MANUAL INCLUDING CIRCUIT DIAGRAMS**

There are no service instructions other than information on replacing batteries. A circuit diagram is supplied in the UMTR-1 modified operation instructions.

**15. STATUS OF SPECIFICATIONS AND MANUFACTURING DRAWINGS**

None

**16. REPORT OF TECHNICAL TESTS AND EVALUATIONS AND WHERE AVAILABLE**

Technical tests other than those performed by the contractor have not been conducted, but it is anticipated one or more sets will be furnished TSL for technical evaluation.

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17. SUGGESTED OPERATIONAL TESTS

Range and clarity of reception under various operational conditions, both between UMR-1's and to an AN/PRC-10.

18. IN ADDITION TO REPORT ON OPERATIONAL TESTS, COMMENTS ARE REQUESTED ON THE FOLLOWING SPECIFIC FEATURES

Utility of the various microphone/earphone options permitted with the UMR-1 modified. Suggestions for improved operating convenience.

19. PROJECT ENGINEER AND CONTACT IN APD FOR ADDITIONAL INFORMATION

20. REPORT ON OPERATIONAL EVALUATION REQUESTED within 2 months.

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